

Highly multiplexed superconducting detectors and readout electronics for balloon-borne and space-based Far-Infrared imaging and polarimetry.

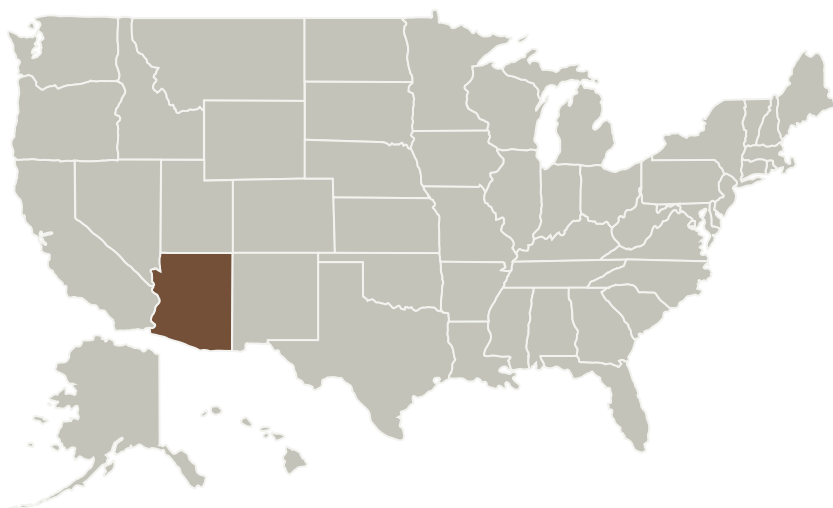
Completed Technology Project (2016 - 2017)



Project Introduction

We propose to develop large-format superconducting detector arrays and low power, highly multiplexed readout electronics for the next generation of balloon-borne and space-based sub-millimeter and far-infrared missions. We will demonstrate this technology on the upcoming NASA BLAST-TNG balloon-borne telescope to measure the polarized emission of galactic dust at wavelengths of 250, 350 and 500 microns. Analysis of the data from the BLAST-TNG flight will provide information about the configuration of the galactic magnetic fields over a wide range of spatial scales and help to clarify their role in star formation.

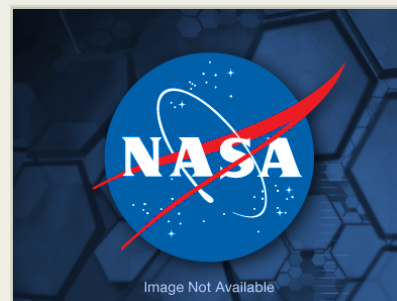
Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Arizona State University-Tempe(ASU)	Supporting Organization	Academia Alaska Native and Native Hawaiian Serving Institutions (ANNH)	Tempe, Arizona

Primary U.S. Work Locations

Arizona



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Organizational Responsibility

Responsible Mission Directorate:

Science Mission Directorate (SMD)

Responsible Program:

Astrophysics

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Project Management

Program Manager:

Joe Hill-kittle

Principal Investigator:

Philip Mauskopf

Co-Investigators:

Samuel Gordon

Sarah Gates

Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.1 Detectors and Focal Planes

Target Destination

Outside the Solar System